

In the Claims:

1-21. (cancelled)

22. (presently amended) A hydrogel contact lens having a base material comprising copolymerized monomers modified with at least one amino acid, and copolymerized monomers modified with betaine, wherein the monomer modified with at least one amino acid is copolymerized with a main chain of the base material, a side chain of the base material or both.

23. (previously presented) The hydrogel contact lens of claim 22, wherein the at least one amino acid is an amino acid occurring in the natural collagen of the cornea.

24. (previously presented) The hydrogel contact lens of claim 22, wherein the at least one amino acid is chosen from the group consisting of glycine, proline, glutamine, alanine, arginine, asparagine, lysine, leucine, serine, and isoleucine.

25. (previously presented) The hydrogel contact lens of claim 22, 23 or 24, wherein the monomer modified with at least one amino acid is a methacryloyl amino acid.

26. (cancelled)

27. (previously presented) The hydrogel contact lens of claim 22, 23, or 24 wherein the percentage of amino acid in the modified polymer is 0.5% to 25% by weight.

28. (cancelled)

29. (presently amended) The hydrogel contact lens of claim 28 48, 49 or 50 wherein the betaine is N-(3-sulfopropyl)-N-methacrylhydroxyethyl-N,N-dimethyl-ammonium betaine (SPE).

30. (presently amended) The hydrogel contact lens of claim 28 48, 49 or 50, wherein the percentage of betaine in the modified polymer is 0.5% to 22% by weight.

31. (previously presented) The hydrogel contact lens of claim 22, 23, or 24, wherein the base material of the contact lens includes at least one of hydroxyethyl methacrylate (HEMA), hydroxypropyl methacrylate (HPMA), vinylpyrrolidone (VP), and an acrylamide derivative.

32. (previously presented) The hydrogel contact lens of claim 31 wherein the base material of the contact lens includes dimethylacrylamide.

33. (previously presented) The hydrogel contact lens of claim 31, wherein the base material constitutes 53% to 99% by weight of polymer.

34. (previously presented) The hydrogel contact lens of claim 22, 23, or 24, wherein the refractive index of the contact lens is 1.22 to 1.51.

35. (previously presented) The hydrogel contact lens of claim 22, 23, or 24, wherein the contact lens, in a swollen state, contains more than 50% by weight of water.

36. (previously presented) The hydrogel contact lens of claim 35 wherein the contact lens in the swollen state contains 55% to 60% of water.

37. (previously presented) The hydrogel contact lens of claim 22, 23, or 24, wherein the lens has an oxygen permeability Dk value of $> 8 \times 10^{-11}$.

38. (presently amended) A method for the preparation of a polymer material for a hydrogel contact lens comprising the steps of:

mixing at least one methacrylate monomer, at least one monomer based on an amino acid, and at least one monomer based on betaine; and

polymerizing the mixed monomers with a starter and a cross-linking agent, wherein the mixture of material initially is polymerized into a block-shape for approximately 1 to 3 days at a controlled temperature and the individual contact lenses are then machined out of the block material.

39. (previously presented) The method of claim 38, wherein the starter is a free radical starter.

40. (previously presented) The method of claim 39, wherein the starter is chosen from the group consisting of azo and peroxy compounds and photochemical reaction starters.

41. (previously presented) The method of claim 38 or 39, wherein the cross-linking agent is added in an amount of 0.01% to 3% by weight.

42. (previously presented) The method of claim 38 or 39, wherein the contact lens is polymerized individually as a cast lens with a polymerization time of less than one hour.

43. (previously presented) The method of claim 42, wherein the reaction starter is added in an amount of 0.2% to 0.5% by weight.

44. (cancelled)

45. (presently amended) The method of claim [[44]] 38 or 39 wherein the reaction starter is added in an amount of 0.05% to 0.2% by weight.

46. (cancelled)

47. (presently amended) The method of claim 46 51 or 52 wherein the percentage of monomers based on amino acids is 0.5% to 25% by weight, the percentage of monomers based on betaine is 0.5% to 22% by weight and the percentage of methacrylate monomers is 99% to 53% by weight.

48. (new) A hydrogel contact lens having a base material comprising copolymerized monomers modified with at least one amino acid, and copolymerized monomers modified with a

betaine, wherein the betaine is at least one of a sulfobetaine and a carboxybetaine chosen to form a block-free copolymer with the base material.

49. (new) The hydrogel contact lens of claim 48, wherein the at least one amino acid is an amino acid occurring in the natural collagen of the cornea.

50. (new) The hydrogel contact lens of claim 48, wherein the at least one amino acid is chosen from the group consisting of glycine, proline, glutamine, alanine, arginine, asparagine, lysine, leucine, serine, and isoleucine.

51. (new) A method for the preparation of a polymer material for a hydrogel contact lens comprising the steps of:

mixing at least one methacrylate monomer, at least one monomer based on an amino acid, and at least one monomer based on betaine; and

polymerizing the mixed monomers with a starter and a cross-linking agent, wherein up to 20% glycerin is added for the polymerization step.

52. (new) The method of claim 51, wherein the starter is a free radical starter.